CLAIMS

1. A method of selecting data of a compressed digital signal comprising a plurality of levels of spatial granularity of data, in a communication network comprising at least two communication apparatuses connected together by the network, the digital signal being available at least at one, so-called first, of the communication apparatuses, the data being adapted to be transmitted from the first apparatus to the other, so-called second, communication apparatus, and that data being sufficient to reconstitute a spatial part of the signal termed region of interest which is specified at the second apparatus, characterized in that the method comprises the following steps:

- determining at least one level of spatial granularity of data as a function of the region of interest and of the structure and organization of the data in the signal;

- selecting data for each determined level of granularity as a function of the region of interest and of the structure and organization of the data in the signal.

2. A method according to claim 1, characterized in that it comprises a prior step of determining a set of data necessary to satisfy the request and not yet received by the second communication apparatus, taking into account the data received previously by that apparatus, the determination of at least one level of spatial granularity depending on that set of data.

3. A method according to claim 1, characterized in that determining at least one level of spatial granularity and selecting data are also performed as a function of at least one characteristic of the network and/or of at least one characteristic of at least one of the first and second communication apparatuses.

4. A method according to claim 2, characterized in that, prior to the step of determining at least one level of granularity of data, the method comprises at least a first step of comparing, with respect to a threshold, the ratio of the sum of the quantity of data already present on the second apparatus plus the minimum quantity of data to be received by the second apparatus to

reconstitute the region of interest, to the total quantity of data present in the signal, the data of the ratio corresponding to a given level of spatial granularity.

5. A method according to claim 4, characterized in that, where there is at least one level of spatial granularity hierarchically lower than the given level of the first step of comparison, then as a function of the result of the comparison, either the selecting step makes provision for selecting a superset of data with respect to the set of data necessary and not yet received, or the method comprises a second step of comparison with respect to a threshold of a ratio using a proportion of data of a hierarchically lower level of spatial granularity.

6. A method according to claim 4, characterized in that, where the given level of spatial granularity of the first comparing step is the lowest level hierarchically, then as a function of the result of the comparison, the selecting step makes provision for selecting either a superset of data with respect to the set of data that is necessary and not yet received, or only that set.

7. A method according to claim 5, characterized in that, where a superset of data is selected, the method comprises a third step of comparison with respect to a threshold of the ratio of the quantity of data not received to the total quantity of data present in the signal, the data corresponding to the same given level of spatial granularity as for the first comparison step.

8. A method according to claim 7, characterized in that, as a function of the result of the comparison, the step of determining a level of spatial granularity leads either to the given level of spatial granularity of the first step of comparison, or to a level of spatial granularity hierarchically superior.

9. A method according to claim 4, characterized in that determining at least one level of spatial granularity and selecting data are also performed as a function of at least one characteristic of the network and/or of at least one characteristic of at least one of the first and second communication apparatuses, the threshold representing the characteristic or characteristics of the network and/or the characteristic or characteristics of at least one of the first and second communication apparatuses.

10. A method according to claim 1, characterized in that the steps of determining and selecting are carried out by the second communication apparatus.

11. A method according to claim 10, characterized in that comprises a step of transmitting commands to the first communication apparatus specifying data of different levels of spatial granularity which have been selected, each command specifying data of the signal at a level of granularity which has been determined.

12. A method according to claim 1, characterized in that the steps of determining and selecting are carried out by the first communication apparatus.

13. A method according to claim 12, characterized in that it comprises a step performed by the first communication apparatus of storing data which it has previously transmitted to the second communication apparatus in response to one or more earlier requests from the latter.

14. A method according to claim 12, characterized in that it comprises a step performed by the first communication apparatus, of receiving from the second communication apparatus information on the data which the latter has previously received in response to one or more previous requests.

15. A method according to claim 1, characterized in that the compressed digital signal is an image signal comprising at least one tile having at least one resolution level, each resolution level comprising at least one precinct constituted by at least one code-block, which is located in the different frequency sub-bands of the resolution level considered and which corresponds to the same spatial position in the image signal.

16. A method according to claim 15, characterized in that the step of determining at least one level of spatial granularity of the data provides for choosing between the tile and the precinct.

17. A method according to claim 16, characterized in that use is made of the protocol JPIP for transmitting data between communication apparatuses.

18. A method according to claim 17, characterized in that choosing between the tile and the precinct amounts to choosing between JPT-STREAM and JPP-STREAM media types for transmitting data.

19. A method according to claim 15, characterized in that the step of determining at least one level of spatial granularity of the data provides for choosing between the tile, the precinct and the code-block.

20. A device for selecting data of a compressed digital signal comprising a plurality of levels of spatial granularity of data, in a communication network comprising at least two communication apparatuses connected together by the network, the digital signal being available at least at one, so-called first, of the communication apparatuses, the data being adapted to be transmitted from the first apparatus to the other, so-called second, communication apparatus, and that data being sufficient to reconstitute a spatial part of the signal termed region of interest which is specified at the second apparatus, characterized in that the device comprises:

- means for determining at least one level of spatial granularity of data as a function of the region of interest and of the structure and organization of the data in the signal;

- means for selecting data for each determined level of granularity as a function of the region of interest and of the structure and organization of the data in the signal.

21. A device according to claim 20, characterized in that it comprises means for determining a set of data necessary to satisfy the request and not yet received by the second communication apparatus, taking into account the data received previously by that apparatus, the determination of at least one level of spatial granularity depending on that set of data.

22. A device according to claim 20, characterized in that determining at least one level of spatial granularity and selecting data also takes into account at least one characteristic of the network and/or of at least one characteristic of at least one of the first and second communication apparatuses.

23. A device according to claim 21, characterized in that it comprises means for comparing, with respect to a threshold, the ratio of the sum of the quantity of data already present on the second apparatus plus the minimum quantity of data to be received by the second apparatus to reconstitute the

region of interest, to the total quantity of data present in the signal, the data of the ratio corresponding to a given level of spatial granularity.

24. A device according to claim 23, characterized in that determining at least one level of spatial granularity and selecting data also takes into account at least one characteristic of the network and/or at least one characteristic of at least one of the first and second communication apparatuses, the threshold representing the characteristic or characteristics of the network and/or of the characteristic or characteristics of at least one of the first and second communication apparatuses.

25. A device according to claim 20, characterized in that the means for determining and selecting form part of the second communication apparatus.

26. A device according to claim 25, characterized in that comprises means for transmitting commands to the first communication apparatus specifying data of different levels of spatial granularity which have been selected, each command specifying data of the signal at a level of granularity which has been determined.

27. A device according to claim 20, characterized in that the means for determining and selecting form part of the first communication apparatus.

28. A device according to claim 27, characterized in that it comprises, in the first communication apparatus, means for storing data which the first apparatus has previously transmitted to the second communication apparatus in response to one or more earlier requests from the latter.

29. A device according to claim 28, characterized in that it comprises, in the first communication apparatus, means for receiving from the second communication apparatus information on the data which the latter has previously received in response to one or more previous requests.

30. A device according to claim 20, characterized in that the compressed digital signal is an image signal comprising at least one tile having at least one resolution level, each resolution level comprising at least one precinct constituted by at least one code-block, which is located in the different frequency sub-bands of the resolution level considered and which corresponds to the same spatial position in the image signal.

31. A device according to claim 30, characterized in that the means for determining at least one level of spatial granularity of the data provide for choosing between the tile and the precinct.

32. A device according to claim 31, characterized in that use is made of the protocol JPIP for transmitting data between communication apparatuses.

33. A device according to claim 32, characterized in that choosing between the tile and the precinct amounts to choosing between JPT-STREAM and JPP-STREAM media types for transmitting data.

34. A device according to claim 30, characterized in that the means for determining at least one level of spatial granularity of the data provide for choosing between the tile, the precinct and the code-block.

35. A communication apparatus, characterized in that it comprises a device for selecting data according to claim 20.

36. An information storage means which can be read by a computer or a microprocessor containing code instructions of a computer program for executing the steps of the method of selecting data according to claim 1.

37. A partially or totally removable information storage means which can be read by a computer or a microprocessor containing code instructions of a computer program for executing the steps of the method of selecting data according to claim 1.

38. A computer program which can be loaded into a programmable apparatus, characterized in that it contains sequences of instructions or portions of software code for implementing the steps of the method of selecting data according to claim 1, when this computer program is loaded and executed by the programmable apparatus.